

FIG. 1

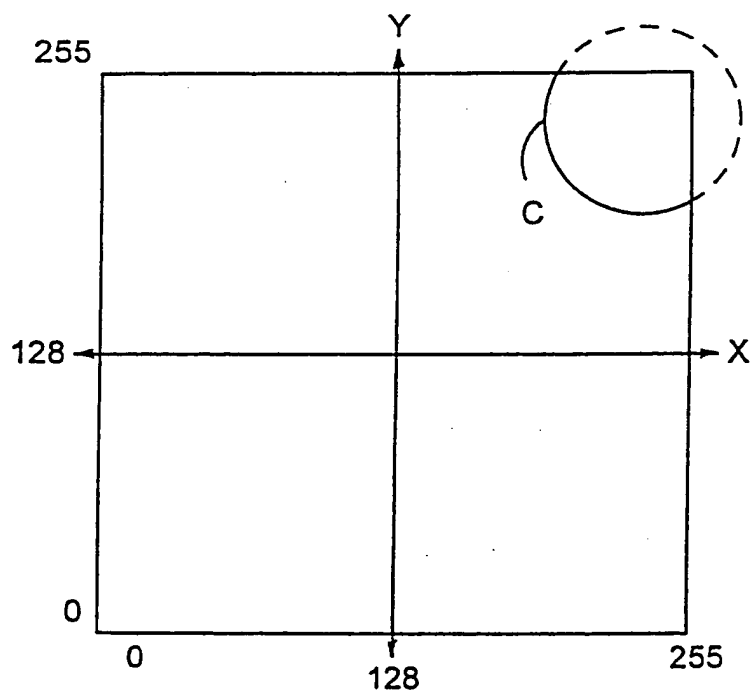


FIG. 2

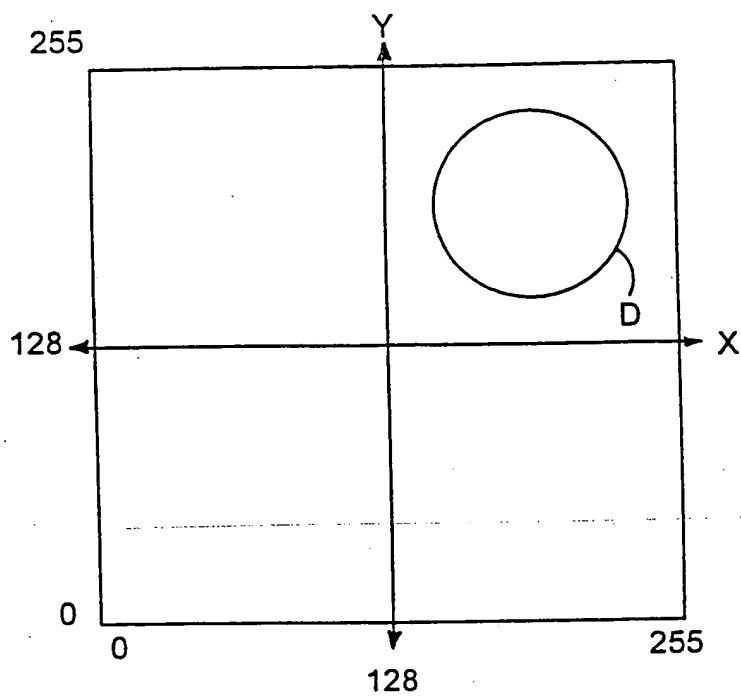


FIG. 3

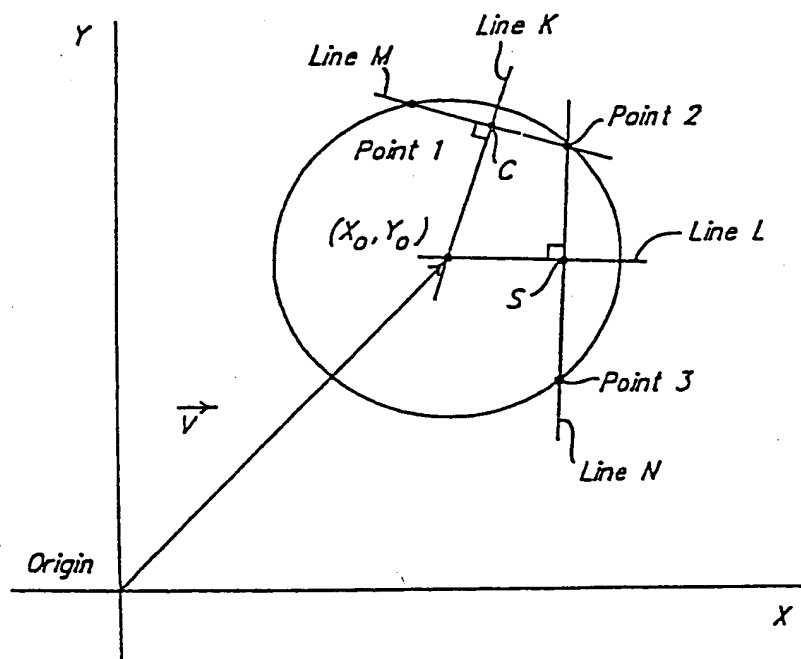
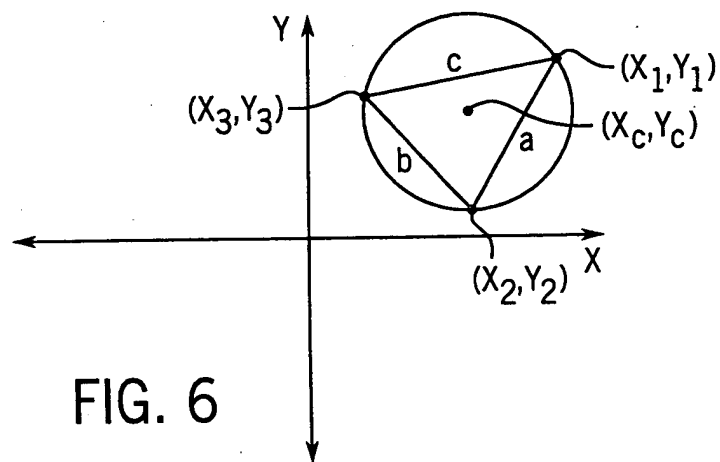
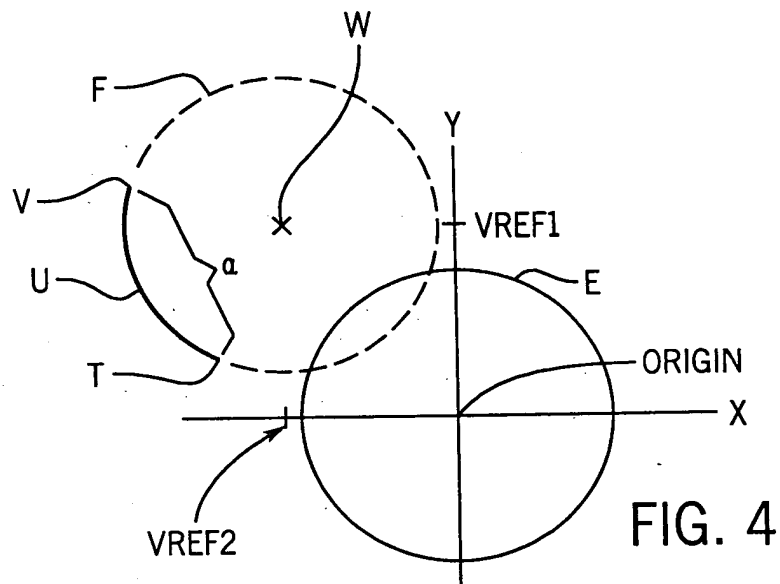
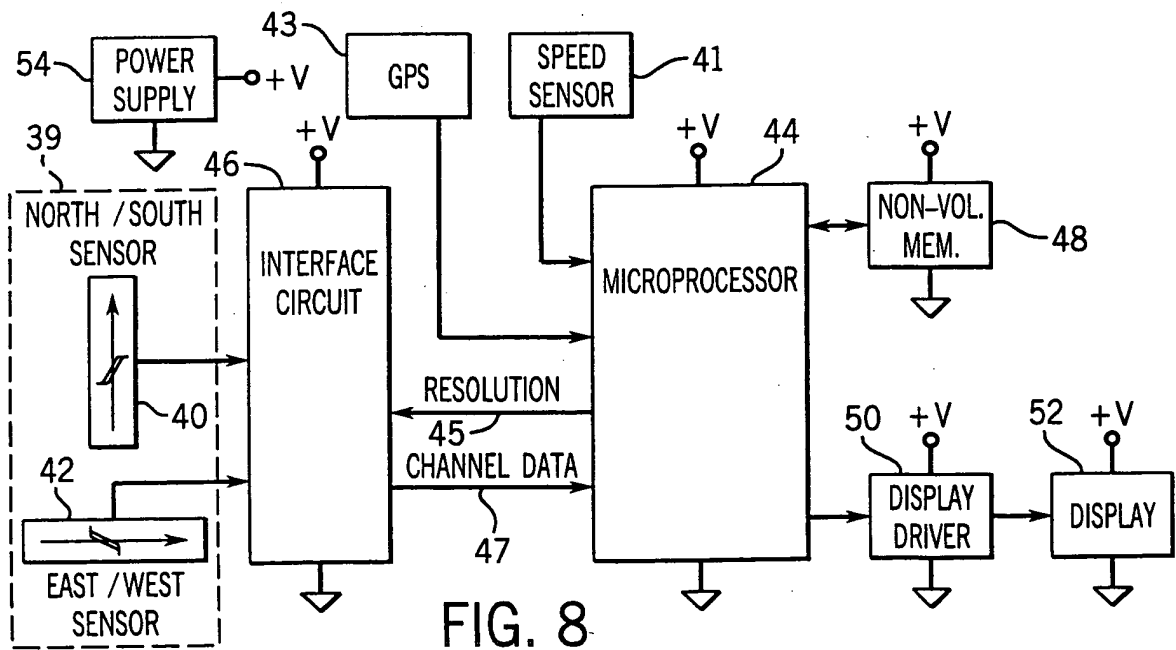
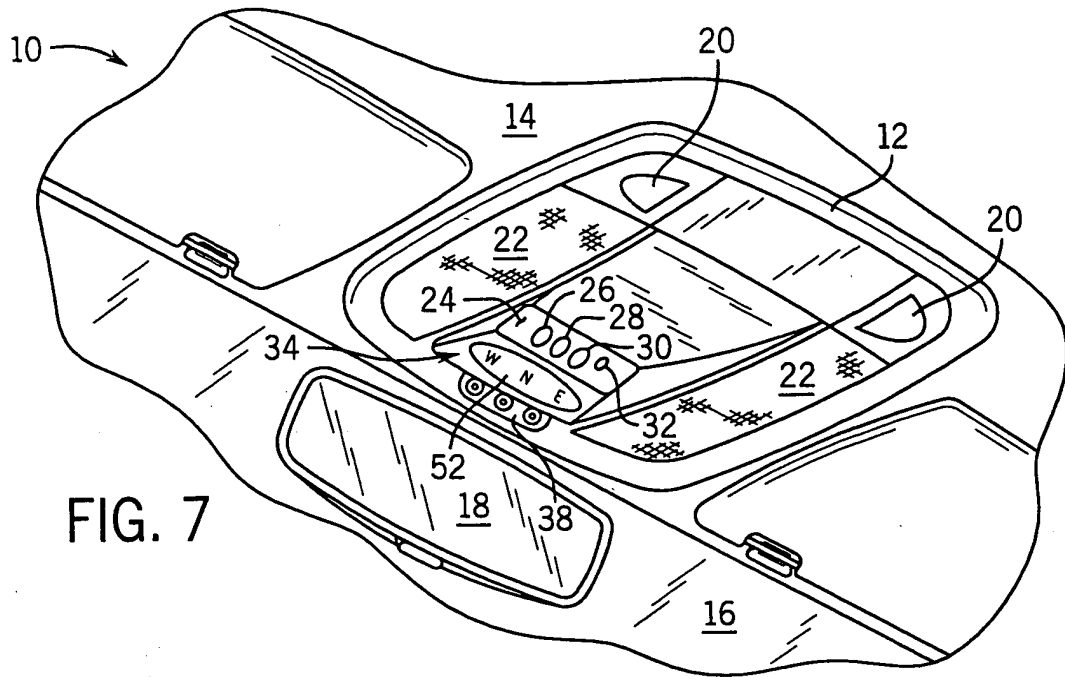


FIG. 5





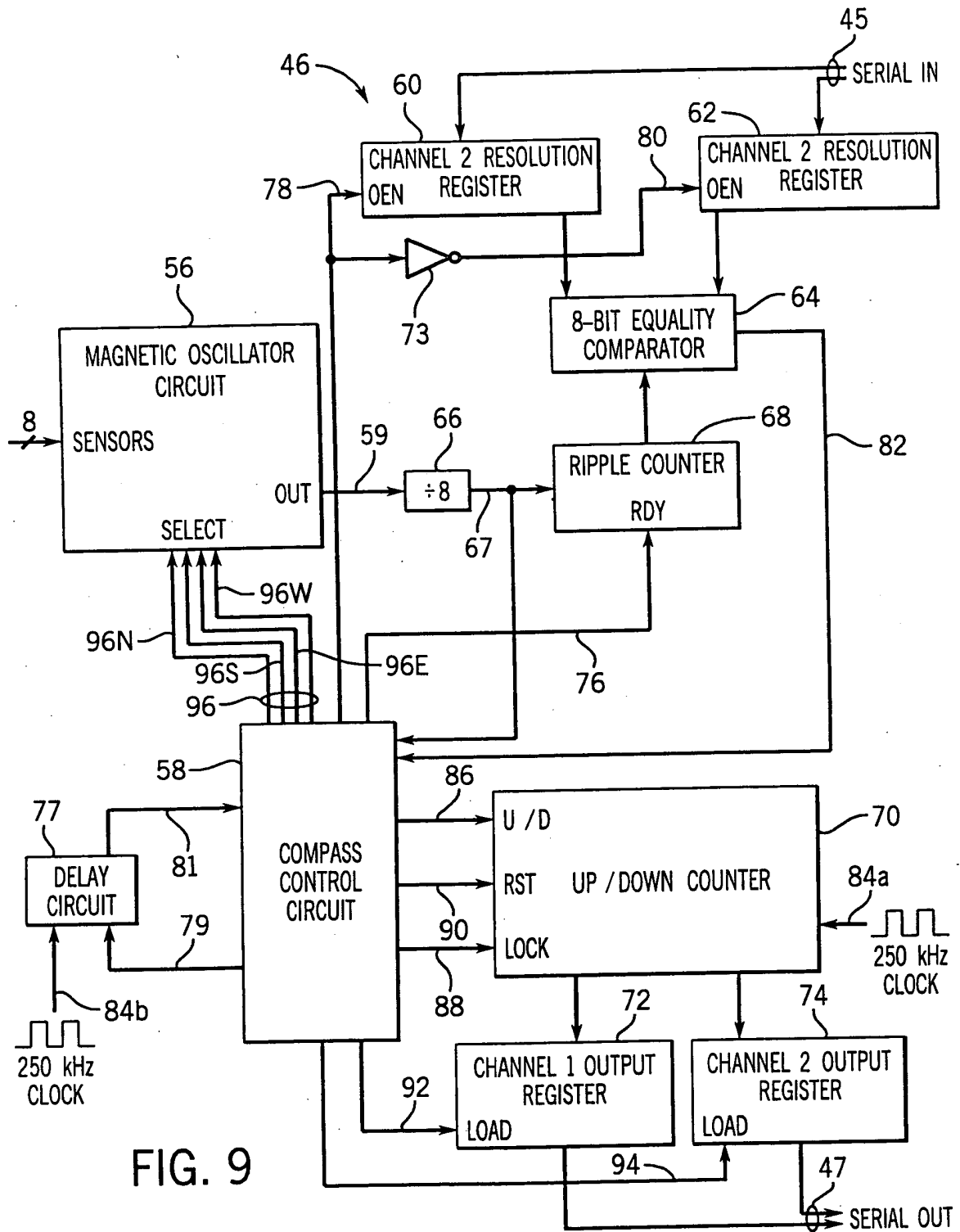


FIG. 9

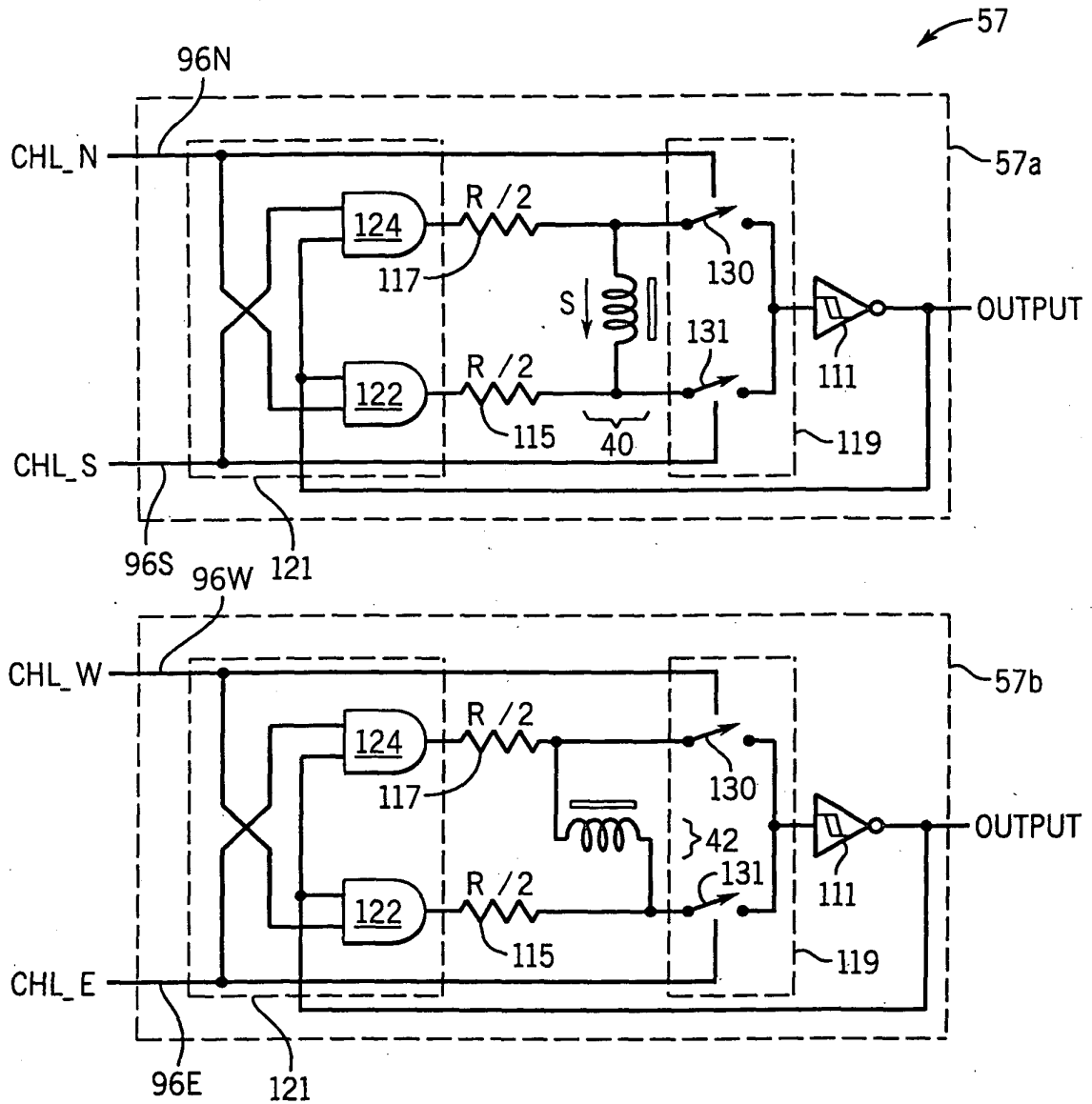


FIG. 10

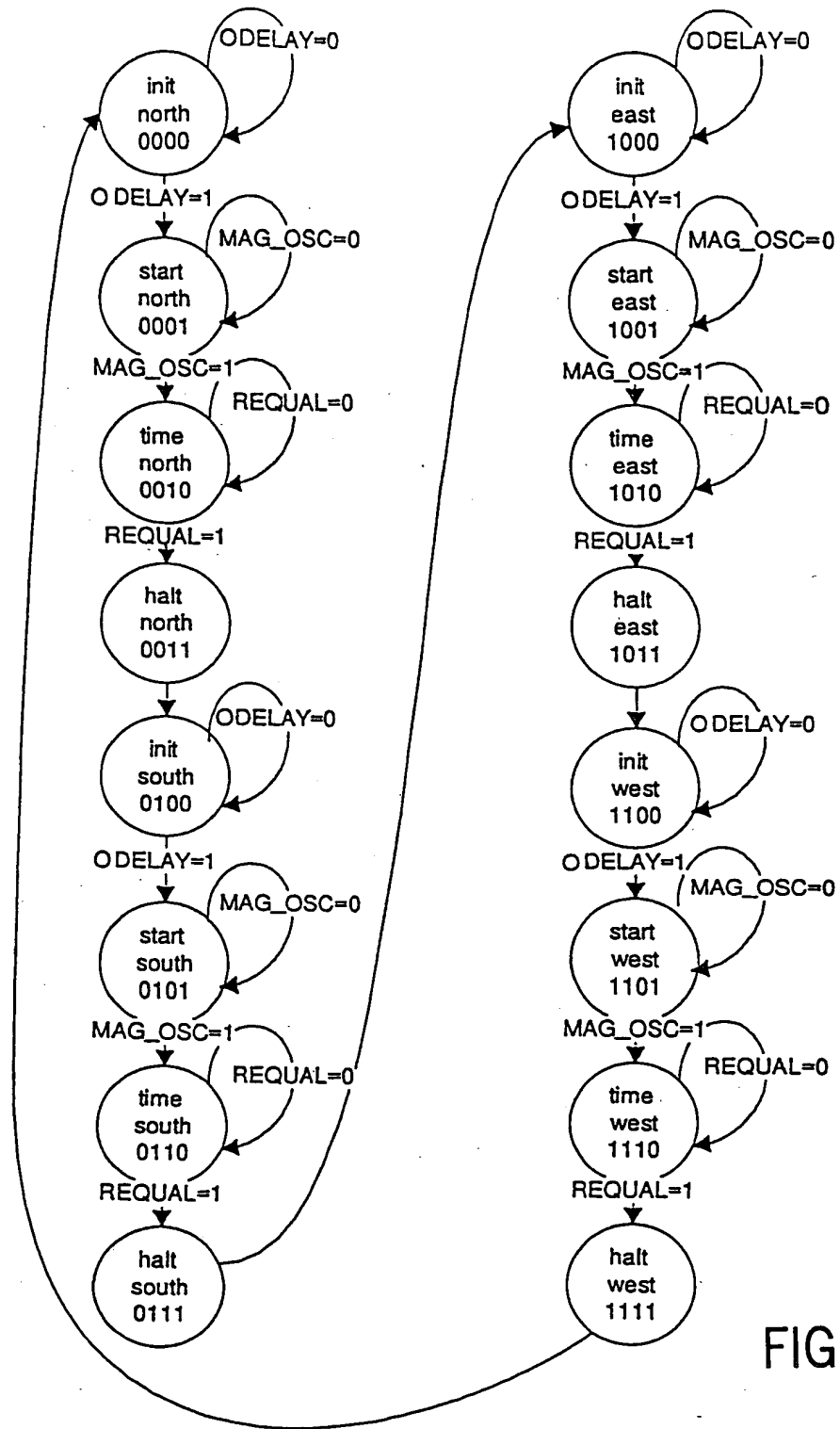


FIG. 11

COMPASS STATE MACHINE STATE OUTPUT MATRIX													
STATE	DESCRIPTION	RCLEAR(I)	DELAY(I)	RENABLE_E(I)	CLEAR(O)	U / D(O)	ENABLE(I)	LATCH_N(O)	LATCH_E(O)	CHL_N(O)	CHL_S(O)	CHL_E(O)	CHL_W(O)
0 0000	INITIALIZE NORTH	1	0	1	0	0	1	0	0	1	0	0	0
1 0001	START NORTH	0	1	1	0	0	1	0	0	1	0	0	0
2 0010	START TIMING NORTH	0	1	1	1	0	0	0	0	1	0	0	0
3 0011	HALT TIMER	1	1	1	1	1	1	0	0	0	0	0	0
4 0100	INITIALIZE SOUTH	1	0	1	1	1	1	0	0	0	1	0	0
5 0101	START SOUTH	0	1	1	1	1	1	0	0	0	1	0	0
6 0110	START TIMING SOUTH	0	1	1	1	1	0	0	0	0	1	0	0
7 0111	HALT TIMER	1	1	1	1	0	1	1	0	0	0	0	0
8 1000	INITIALIZE EAST	1	0	0	0	0	1	0	0	0	0	1	0
9 1001	START EAST	0	1	0	0	0	1	0	0	0	0	1	0
10 1010	START TIMING EAST	0	1	0	1	0	0	0	0	0	0	1	0
11 1011	HALT TIMER	1	1	0	1	1	1	0	0	0	0	0	0
12 1100	INITIALIZE WEST	1	0	0	1	1	1	0	0	0	0	0	1
13 1101	START WEST	0	1	0	1	1	1	0	0	0	0	0	1
14 1110	START TIMING WEST	0	1	0	1	1	0	0	0	0	0	0	1
15 1111	HALT TIMER	1	1	0	1	0	1	0	1	0	0	0	0

FIG. 12



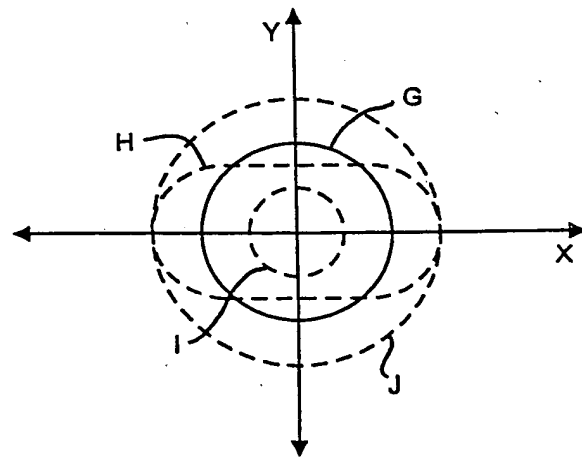


FIG. 13

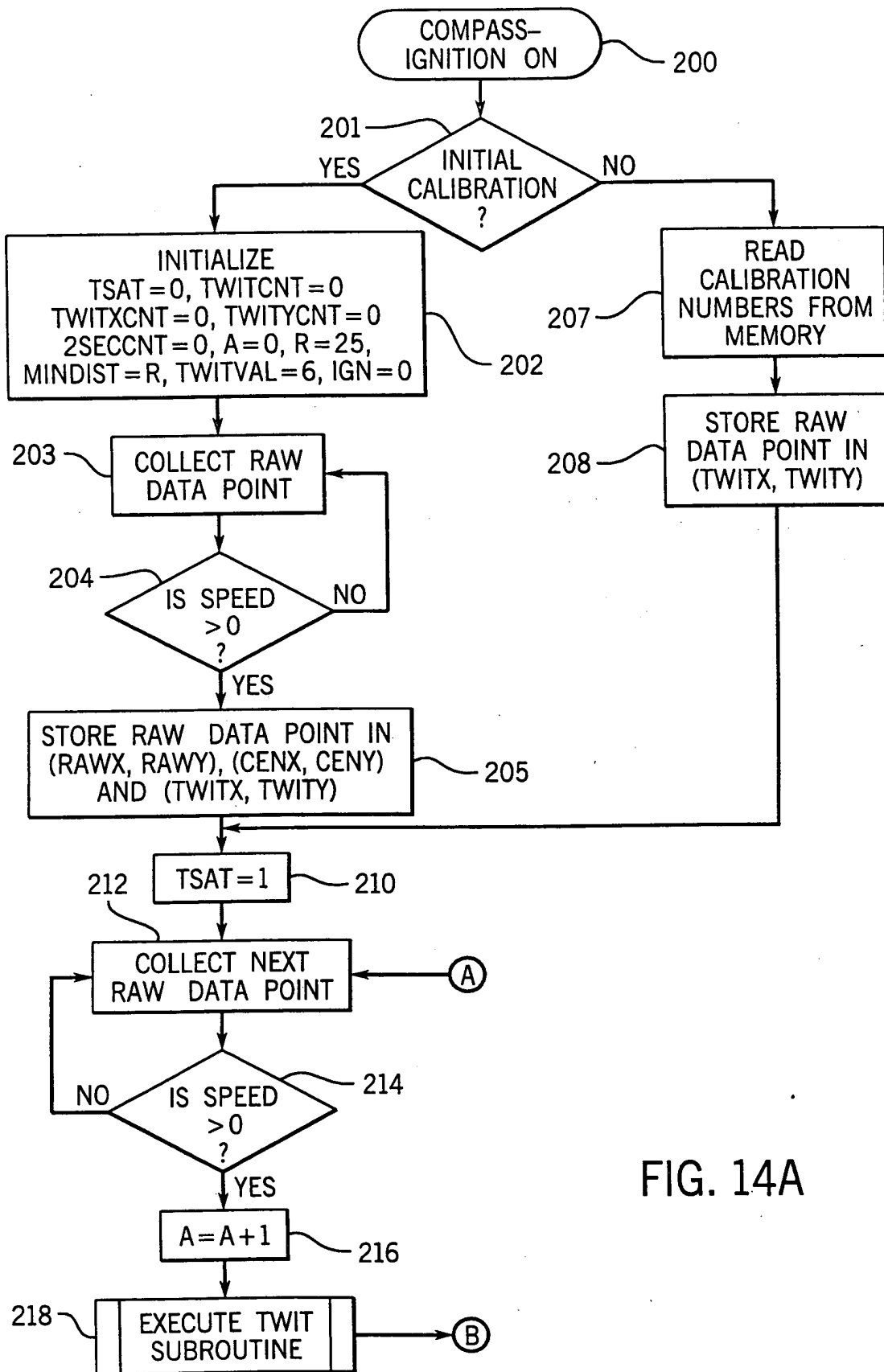


FIG. 14A

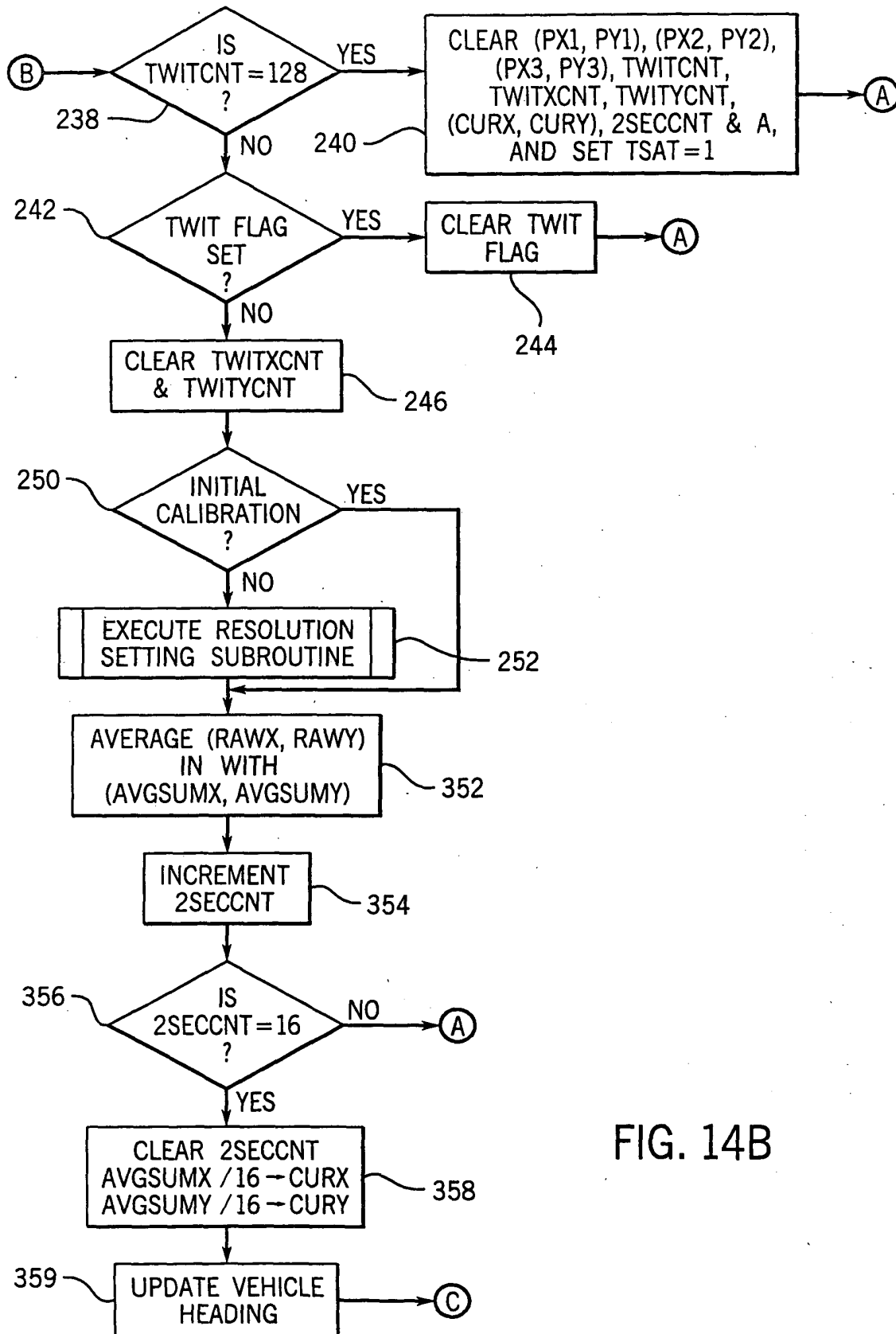


FIG. 14B

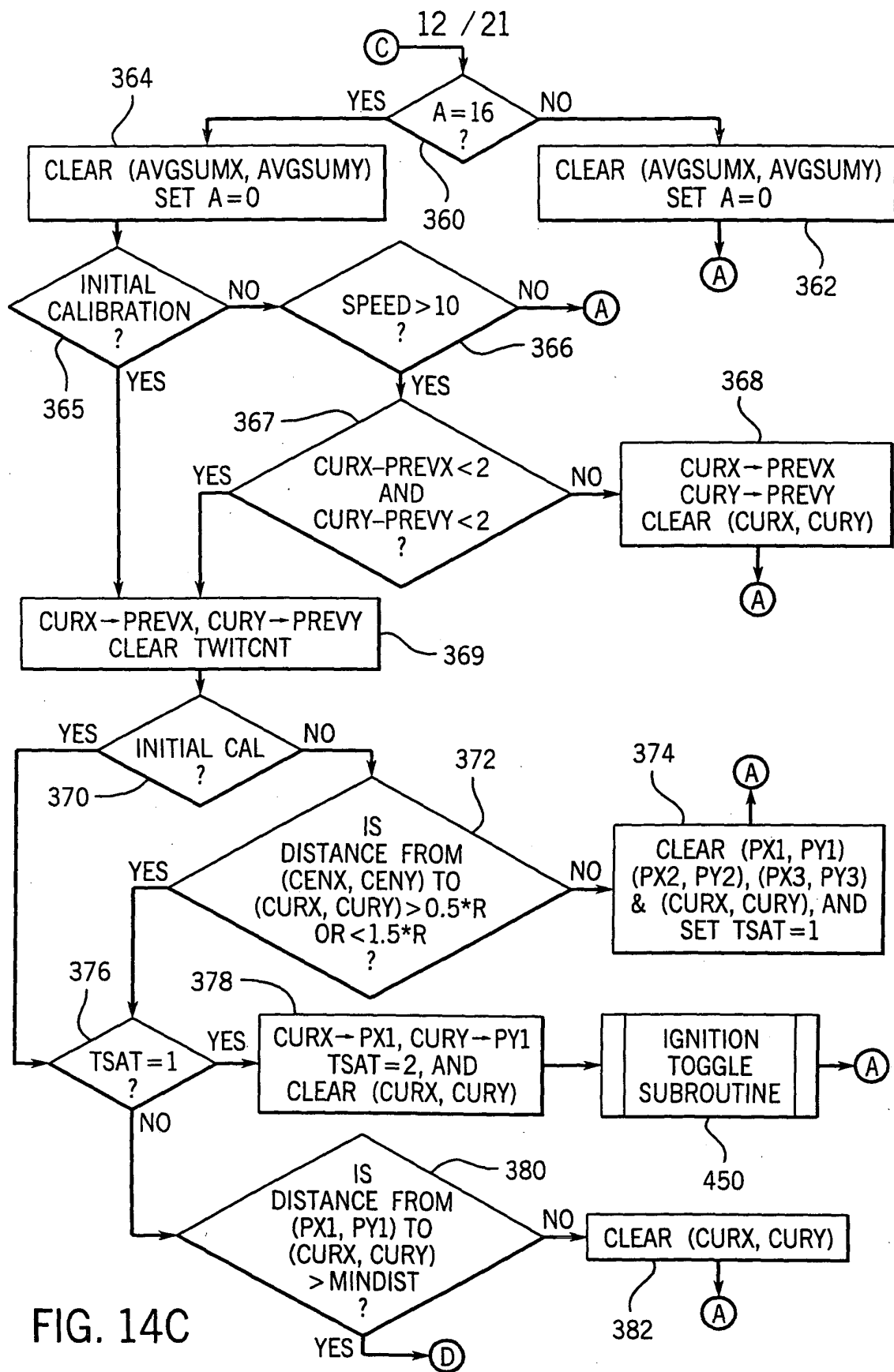
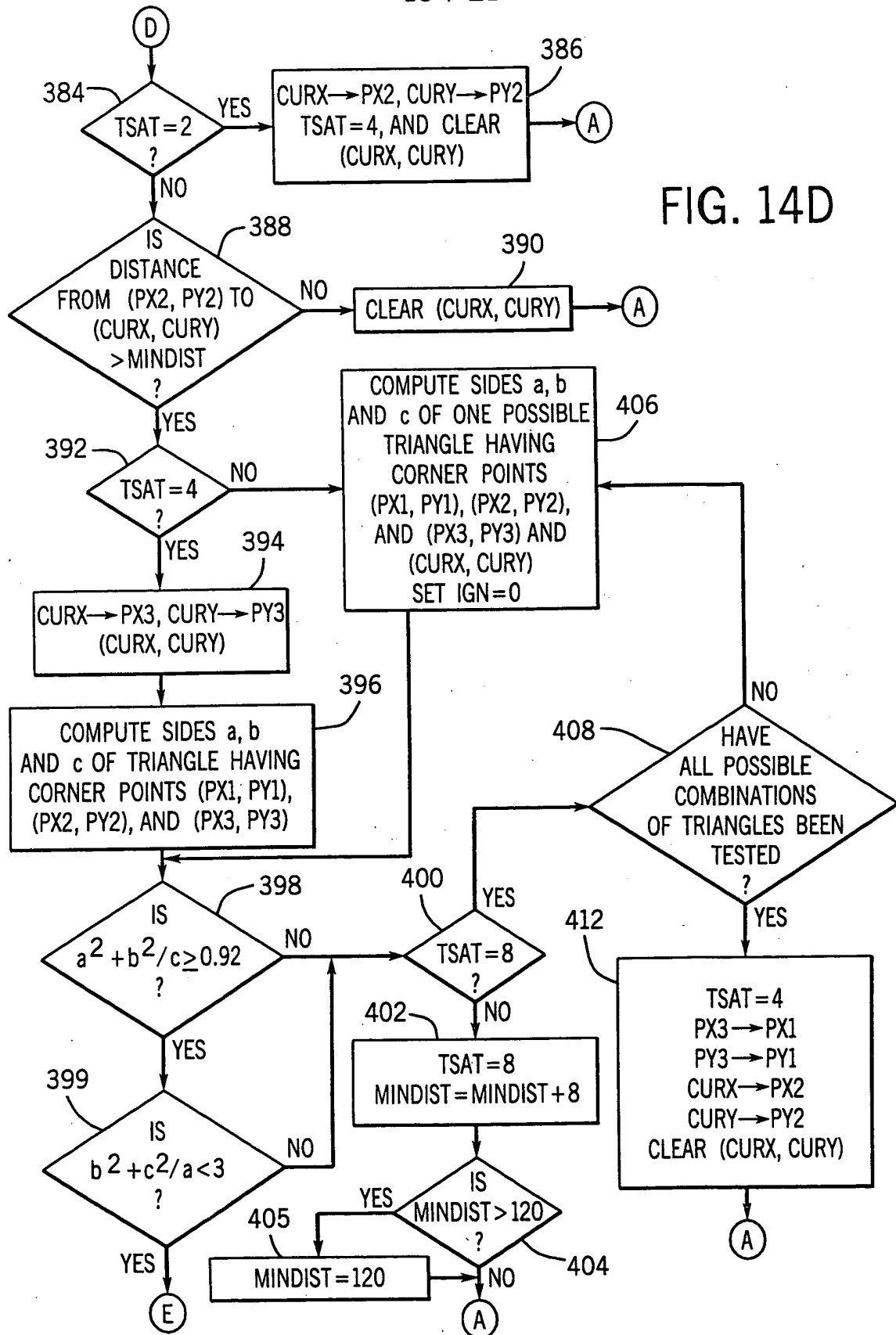


FIG. 14C

FIG. 14D



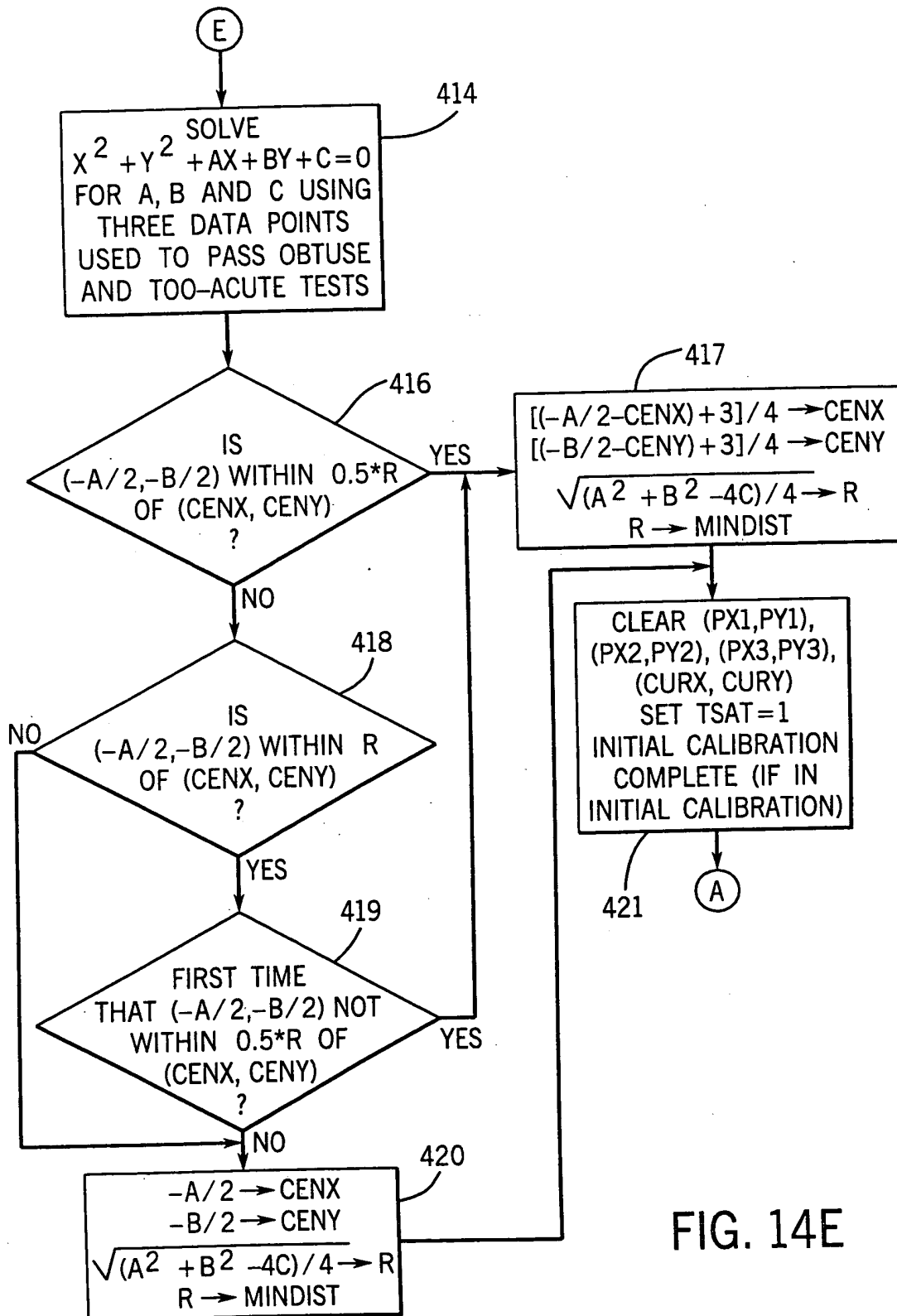


FIG. 14E

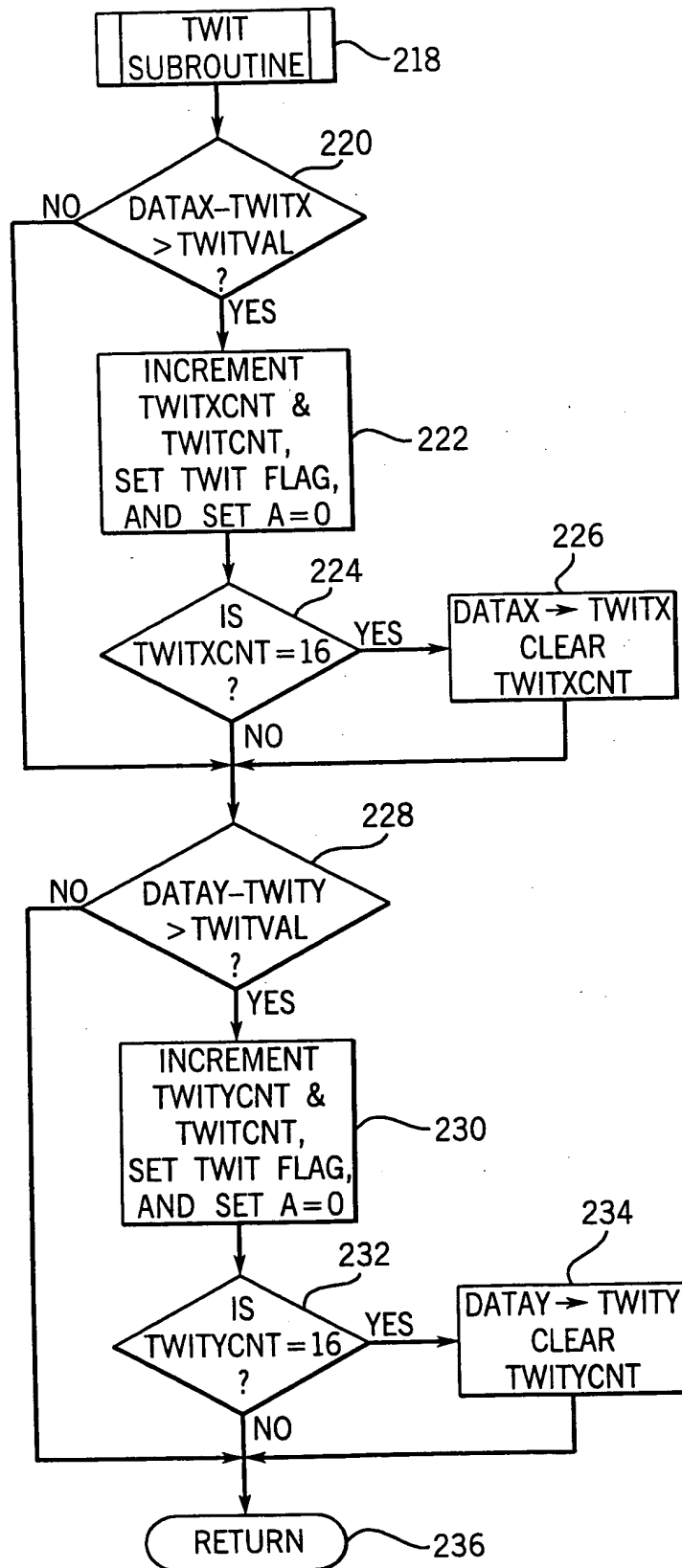
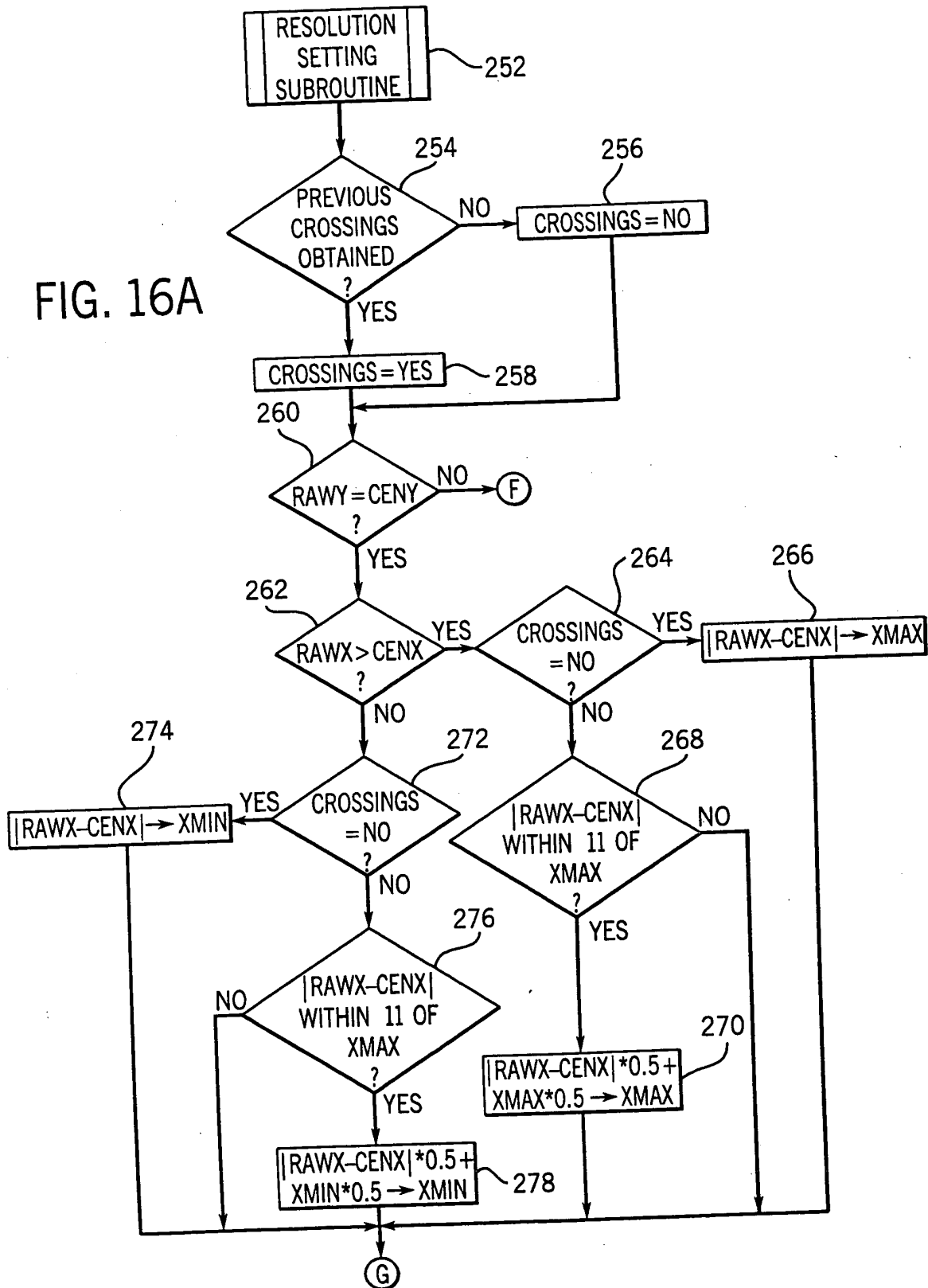


FIG. 15

FIG. 16A





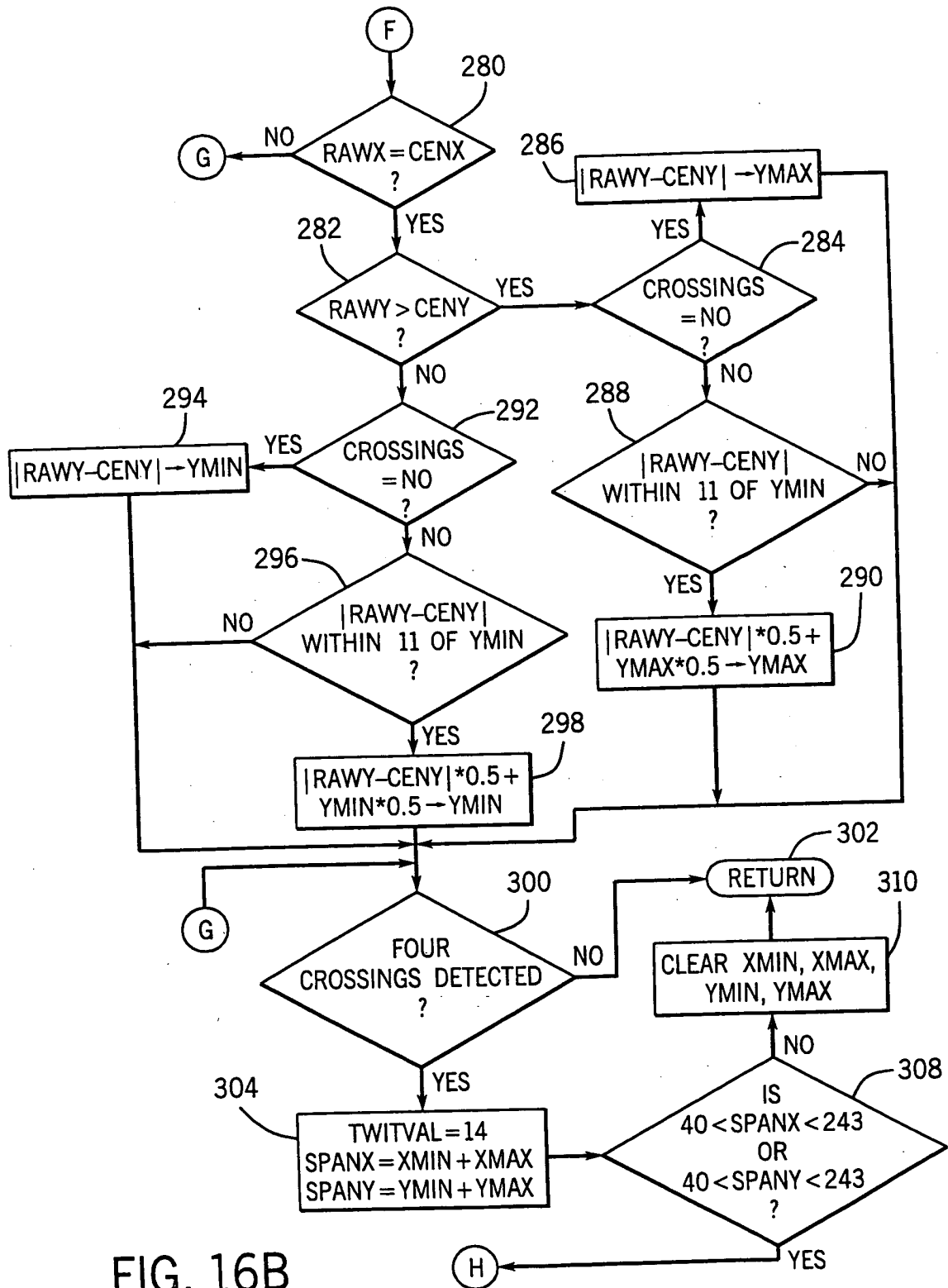
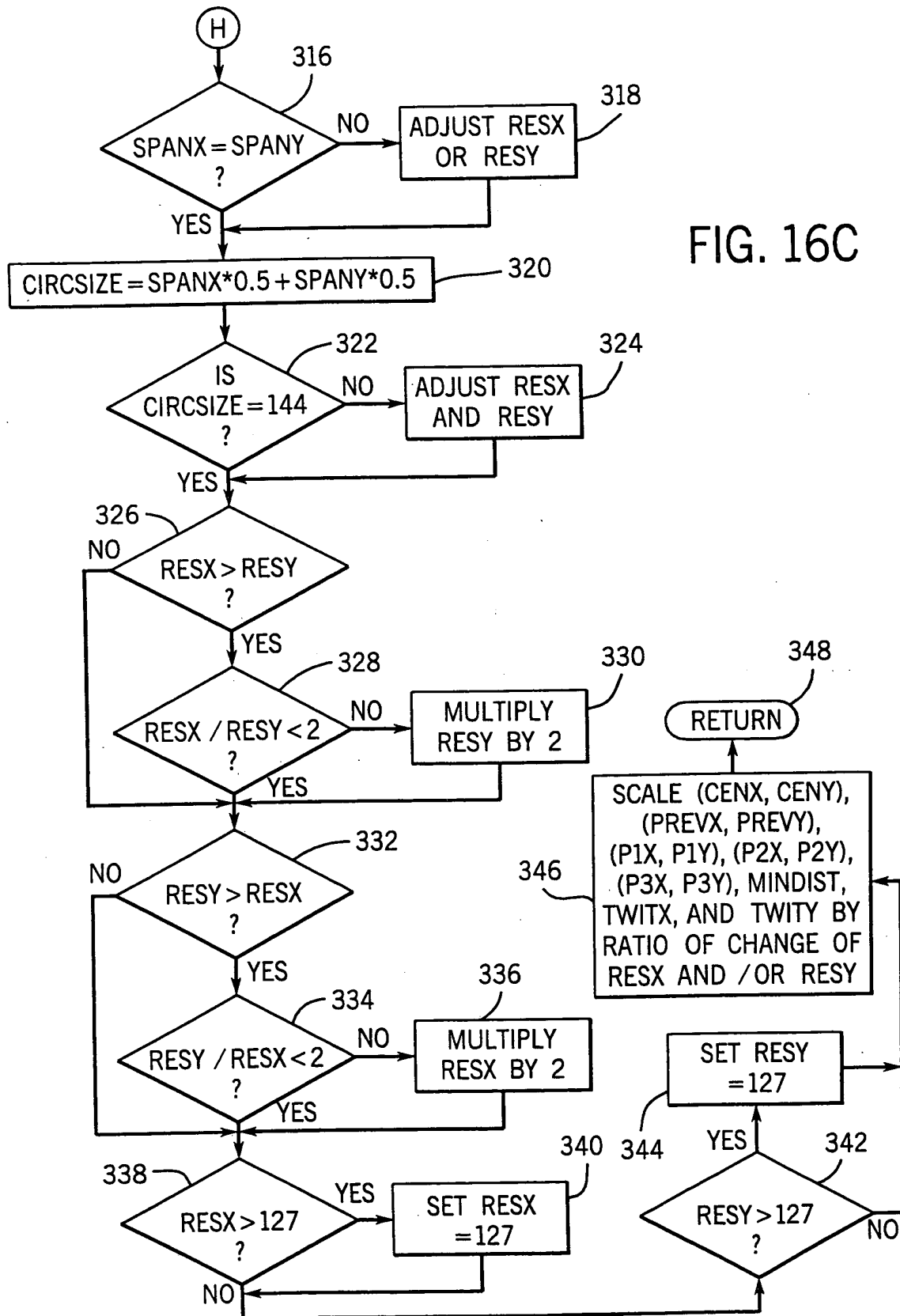


FIG. 16C



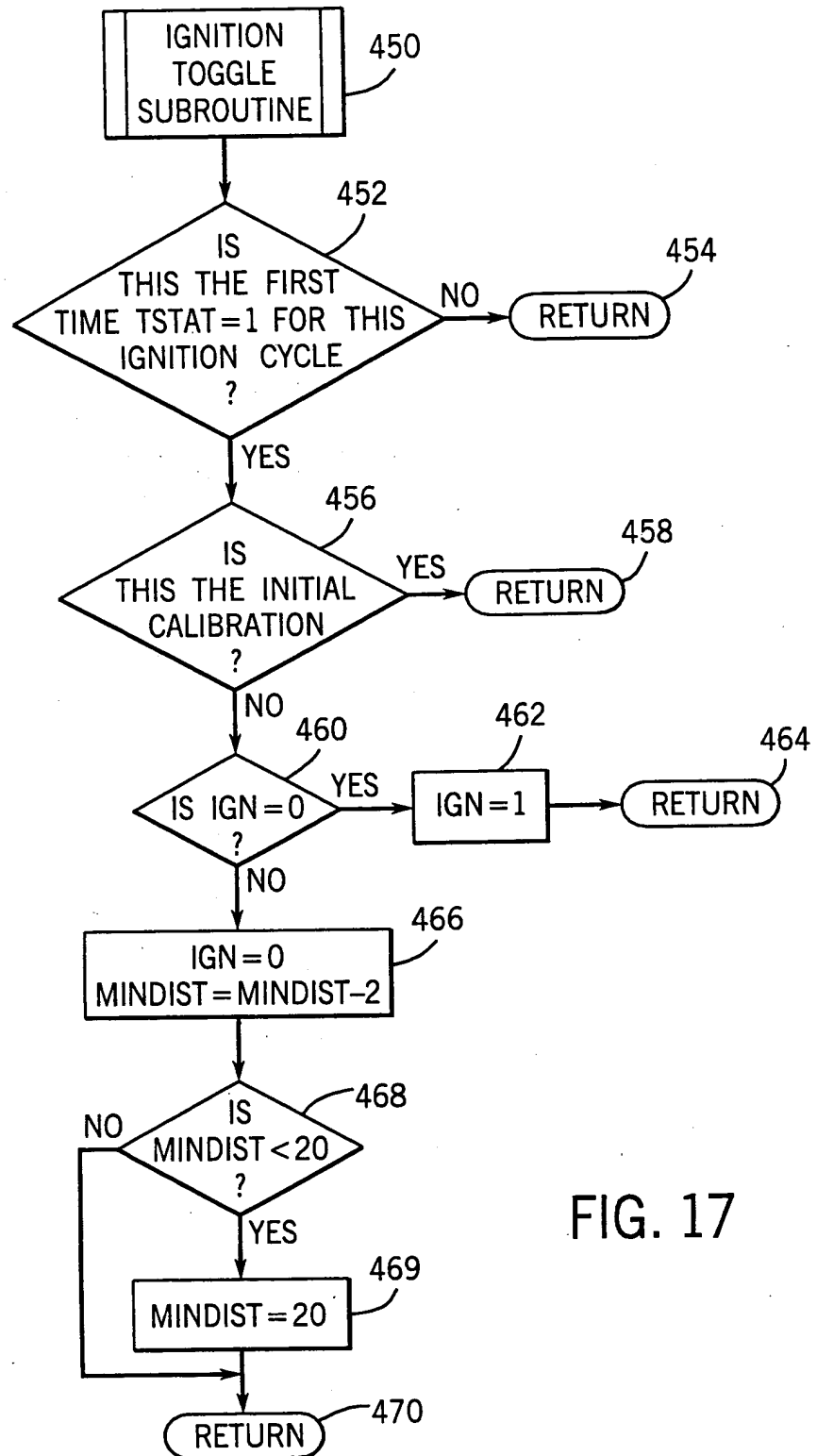


FIG. 17

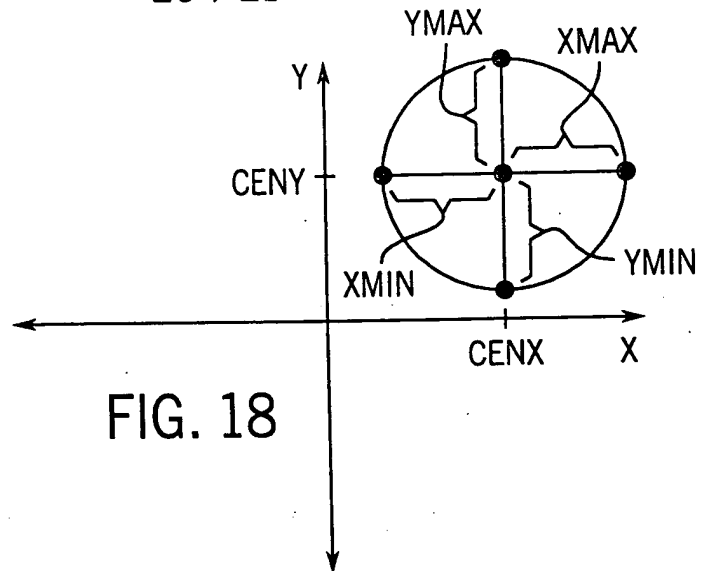


FIG. 18

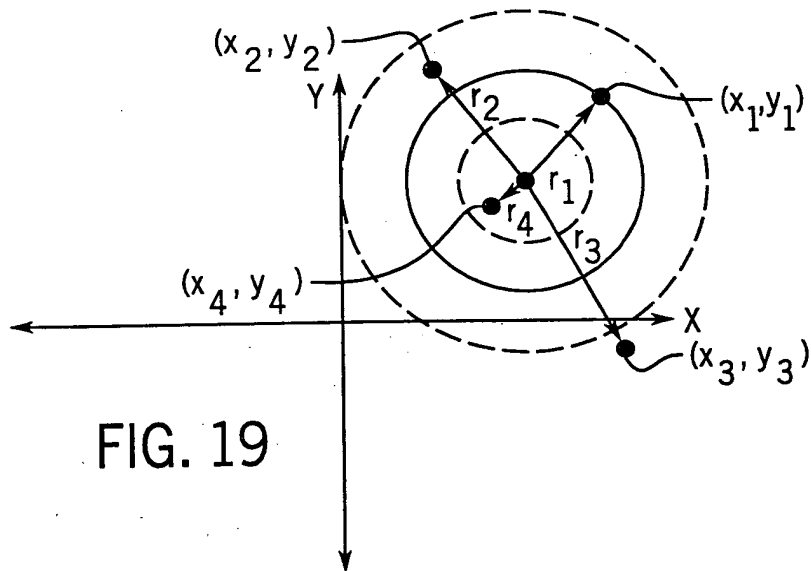


FIG. 19

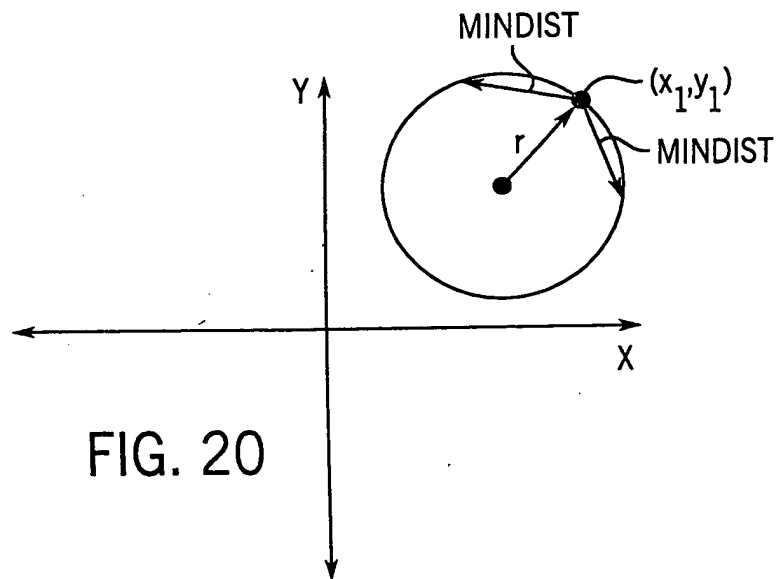


FIG. 20

